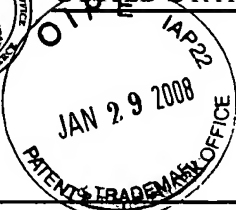*I.F.W*

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,905	01/17/2002	Scott Aguais	D3398-00033CIP	1722

7590   01/10/2008

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EXAMINER
GRAHAM, CLEMENT B

ART UNIT	PAPER NUMBER
3692	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/051,905	AGUAIS ET AL.
	Examiner	Art Unit	
	Clement B. Graham	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/18/07*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1. Claims 1-11 remained pending and claims 12-16 has been added.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 12, 16, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Applicant's claims are directed to an algorithm. Specifically, claims recites "storing", "pricing" and "simulating", however these steps are mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, for example) and abstract ideas without a practical application are found to be non-statutory subject matter. Therefore, Applicant's claims are non-statutory as they do not produce a useful, concrete and tangible result.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 12, 16 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, Claims 1, 12, 16, states " a second pricing engine" where is the first-----?, it is For further examination, the examiner interprets the limitation in light of this 112, second rejection.

In particular, Claims 1, 12, 16, recites the word [" basis instruments"].

However this language fails to distinctly claim Applicant's invention because the scope of the claim is unclear. Moreover the specification fails to clarify, the meaning of the limitation. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a

patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-16, are rejected under 35 U.S.C. 102(e) as being anticipated by Freeman et al(Hereinafter Freeman US Patent No: 6, 249, 775).

As per claim 1, 13-15, Freeman discloses a system for valuing and managing the risk of a plurality of credit instruments, said system comprising:

a) a database for storing credit instrument data;

b) a first calibration engine connected to said database, wherein said first calibration engine generates calibration parameters from said credit instrument data (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364,)

c) a second pricing engine connected to said database and said first calibration engine, wherein said second pricing engine is adapted to value said one or more credit instruments according to no-arbitrage financial principles, wherein at least one of a net present value and a par-spread Is calculated for each of said one or more credit instruments using current market data (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364) d) a third engine connected to said second pricing engine for performing simulation-based computations (see column 2 lines 54-67 and column 3 lines 1-67 and column 4 lines 49-67 and column 5-18 lines 1-67)

e) a fourth risk engine connected to said second pricing engine and said third engine for computing a plurality of risk and reward metrics; and

f)   a report generator connected to said fourth risk engine for generating reports for use in managing risk. (Note abstract and see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 2, Freeman discloses wherein at least of said plurality of credit instruments is a loan. (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 3, Freeman discloses further comprising at least one input data module for storing data relating to credit instruments in said database. (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 4, Freeman discloses further comprising a portfolio hierarchy server. (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 5, Freeman discloses wherein , said first calibration engine comprises:

a) a first module for generating a one or more basis instruments from input data relating to said one or more credit instruments, wherein said input data comprises at least one of prices, ratings, sectors, and terms and conditions;

b) a second module for generating a first term structure of risk free zero prices and a risk-neutral process for interest rates from one or more basis instruments (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364)

c) a third module for generating one or more basic spread matrices from said one or more basis instruments and said first term structure of risk-free zero prices;

d) a fourth module for generating a second term structure of risk-neutral transition matrices and at least one smoothed credit spread matrix using said first term structure of risk-free zero prices, said module also adapted to develop generators using a transition matrix manager (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364,

e) a fifth module for generating a third term structure of riskneutral transition matrices for a specific named obligor from said at least one smoothed credit spread matrix, said first term structure of risk-free zero prices, and said second term structure of risk-neutral transition matrices; and

f) a sixth module for generating a plurality of spread volatility matrices. (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 6, Freeman discloses wherein a at least one of said modules of said calibration engine generates data subsequently stored in a Mark-to-Future

cube. (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 7, Freeman discloses wherein said second pricing engine comprising:

a) a first module for defining a state space;

b) a second module for generating a state space by modeling the underlying economic behavior driving the exercise of embedded options and other structural features of said plurality of credit instruments(see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364)

c) a third cash flow generation module for generating cash flows for said plurality of credit instruments, whereby said credit instruments may be subject to different prepayment or credit state assumptions; and

d) a fourth module connected to said third cash flow generation module for generating a plurality of valuation attributes from said generated cash flows) (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 8, Freeman discloses where the net present value of a credit instrument is calculated by performing a valuation of a plurality of cash flows for the credit instrument. (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 9, Freeman discloses wherein the said valuation of said plurality of cash flows is performed using a lattice valuation technique. (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 10, Freeman discloses where said valuation of said plurality of cash flows is performed using Monte Carlo simulation technique. (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364.)

As per claim 10, Freeman discloses wherein the par spread of a credit instrument is calculated by determining one or more spreads such that the net present value of the credit instrument equals a specified value. (see column 2 lines 54-67 and column 3 lines 1-67 and column 4 lines 49-67 and column 5-18 lines 1-67).

As per claim 11, Freeman discloses wherein the par spread of a credit instrument is calculated by determining one or more spreads such that the net present value of the credit instrument equals a specified value. (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 12, Freeman discloses a no-arbitrage-based system liar valuing one or more credit instruments, said system comprising:

a)   database for storing credit instrument data;

b)   a first calibration engine connected to said database, wherein said first calibration engine generates calibration parameters from said credit-instrument data and current market, said credit instrument data comprising market data;

a second pricing· Engine connected to said database and said first calibration engine, wherein said second pricing engine is configured to value said one or more credit instruments s according to no-arbitrage financial principles, wherein in least one or a net present value and a par-spread is each calculated for each of said one or more credit instruments current market data; (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364)

d) a third engine connected to said second pricing engine for performing simulation based computations in which a plurality of scenarios arc applied to market data to generate a plurality of valuation and exposure measures(see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364)

e) a fourth risk engine connected to said second pricing engine and said third engine for computing a plurality or risk and reward matrix from said valuation and exposure measures; and

a report generator connected to fourth risk engine for generating reports for use in managing risk. wherein the second pricing engine is configured to produce at least one risk-neutral transition matrix. (see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

As per claim 16, Freeman discloses a non arbitrage based system for valuing one or more credit instruments said system comprising:a database for storing credit instruments data; a first calibration parameters from said credit instruments data and

current market data, said credit instrument data comprising market data the first calibration engine having a first module for generating one or more basis instruments from input data relating to said one or more credit instruments wherein said input data comprises at least one of prices, rating, sectors, and conditions, a second module for generating a first term structure

matrices and at least one smoothed credit spread matrix using said First term structure of risk-free zero prices, said module also configured to develop generators using a transition matrix manager, a fifth module for generating a third tern•; structure of risk-neutral transition matrices for a specific named obligor from said al least one smoothed credit spread matrix, said first term structure OF risk free zero prices, and said second term structure or risk-neutral transition rnatricees, and a sixth module for generating a plurality of spread volatility matrices(see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364)

• c)   a second pricing engine connected to said database and said first calibration engine said second pricing engine is configured to value said one or more credit instruments ;according to no-arbitrage financial principles, wherein at least one of a net present value and a par-spread is calculated for each of said one or mire credit instruments using current market data, having a first module for defining a state space, a second module for generating a state space by modeling the underlying economic behavior driving Mc exercise of embedded options and other structural features of said plurality of credit instruments, a third cash now generation module for generating cash flows for said plurality of credit instruments, whereby said credit instruments may be subject to different prepayment or credit stale assumptions, and a fourth module connected to said third cash flow generation module for generating a plurality of attributes from said generated cash flows..

d) a third engine connected to said second pricing engine for performing simulation based computations in which a plurality of scenarios :ire applied to market data to generate a plurality of valuation and exposure measures:

e) a fourth risk tine connected to said second pricing engine and said

third engine computing a plurality of risk and reward metrics from said valuation and exposure measure and

f)   a report generator connected to said fourth risk engine for generating reports for list! in managing risk(see paragraphs 0073, 0077, 0082, 0094-0097, 01210229, 0240, 0274-0280, 0364).

CONCLUSION

5. Applicant's arguments that filed 10/9/2007 has been fully considered but they are moot in view of new grounds of rejections.

6.   Applicant's claims 1, 5,12, 16, states " configured to value, configured to develop, configured to produce" "

However the subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:

(A)   statements of intended use or field of use,

(B)   "adapted to" or "adapted for" clauses,

(C)   "wherein" clauses, or

(D)   "whereby" clauses.

This list of examples is not intended to be exhaustive. See also MPEP § 2111.04.

**>USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily). In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320,

1322 (Fed. Cir. 1989) ("During patent examination the pending claims must be
interpreted as broadly as their terms reasonably allow.... The reason is simply that
during patent prosecution when claims can be amended, ambiguities should
be recognized, scope and breadth of language explored, and clarification imposed.... An
essential purpose of patent examination is to fashion claims that are precise, clear,
correct, and unambiguous.

Only in this way can uncertainties of claim scope be removed, as much as possible,
during the administrative process.").<

Where an explicit definition is provided by the applicant for a term, that definition will
control interpretation of the term as it is used in the claim. Toro Co. v. White
Consolidated Industries Inc., 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed.
Cir. 1999) (meaning of words used in a claim is not construed in a "lexicographic
vacuum, but in the context of the specification and drawings."). Any special meaning
assigned to a term "must be sufficiently clear in the specification that any departure from
common usage would be so understood by a person of experience in the field of the
invention." Multiform Desiccants Inc. v. Medzam Ltd., 133 F.3d 1473, 1477,
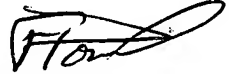45 USPQ2d 1429, 1432 (Fed. Cir. 1998). See also MPEP § 2111.01.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clement B Graham whose telephone number is 571-272-6795. The examiner can normally be reached on 7am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached on5 71-272-6702. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-305-0040 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CG

Dec 24, 2007

FRANTZY POINVIL.
PRIMARY EXAMINER
AU 3692

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